

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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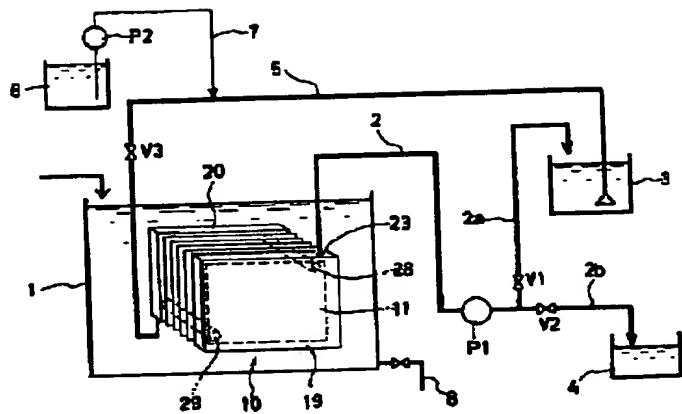
APPLICATION DATE : 28-10-93  
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APPLICANT : KURITA WATER IND LTD;

INVENTOR : IWASAKI KUNIHIRO;

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**TITLE : SUBMERGED TYPE MEMBRANE  
SEPARATION DEVICE**



**ABSTRACT :** PURPOSE: To perform effective washing by a method wherein washing liquid is introduced into a permeation chamber of a membrane unit, without imparting excessive pressure to a membrane, to replace permeation water, in the chamber, having permeated the membrane with the washing liquid, and the washing liquid is made to permeate the membrane in a direction opposite to the direction of the flow of the water so that gel-like cake attached to the outer surface of the membrane is separated and removed.

**CONSTITUTION:** In a submerged type membrane separation device wherein a membrane unit 10 provided with membranes and a permeation chamber 11, into which water having permeated the membranes flow in, is submerged in a liquid to perform a membrane separation process, a plurality of connection ports 23 in communication with the permeation chamber 11 are formed in the unit 10, and a takeout pipe 2 including a suction pump  $P_1$  is connected to one of the ports 23 and a feed pipe 5 for water or chemical liquid is connected to other one of the ports 23 so that the water or chemical is introduced through the feed pipe 5 into the permeation chamber by operating the suction pump to replace the liquid in the chamber with the water or chemical liquid.

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